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| Subject: Multiplication | | **Teacher:** | | **Grade Level:**Fourth | **Date(s):** September 26-30, 2016 | |
| **Curriculum Area:** Math | | | | **I Can Statements &Learning Targets** *(I can……..):*  I can interpret (discuss) multiplication equations.  I can write a multiplication equation based on given data. | | |
| **Content :** *Common Core Standards & Essential Standards*  **4.OA.1 –** Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5x7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.  **SPIRAL** - **4.NBT.4** | | | | **Technology Standards &Resources:**  [**http://www.ncpublicschools.org/docs/acre/standards/new-standards/info-technology/gradek.pdf**](http://www.ncpublicschools.org/docs/acre/standards/new-standards/info-technology/gradek.pdf) **- Grade 4 - pgs. 9-10**  [Fourth Grade Tasks](http://3-5cctask.ncdpi.wikispaces.net/Fourth+Grade+Tasks)  [Mr. Anker Tests 4th Grade Activities](http://www.henryanker.com/4th_Activities.html) (Assessments)  <http://www.doe.k12.de.us/assessment/files/Math_Grade_4.pdf> - (Scrollfor specific standard)  Internet4Classrooms [Common Core Math Tasks](http://www.internet4classrooms.com/common_core/3rd_5th_math_tasks.htm)  IXL[Fourth Grade Math Skills](http://www.ixl.com/math/grade-4) - categorized | | |
| Essential Question(s): *(What question(s) should students be able to answer at the end of the lesson/unit?)*   * How many ways can I interpret a multiplication equation? (An array, repeated addition, a comparison) | | | | **Higher Order Thinking/Revised Blooms:***(Questions that will enable students to find connections or extend learning.)*  How does repeated addition relate to multiplication?  How can multiplication help you to find area? | | |
| **Vocabulary:** *Academic/Content*  Repeated addition, Array, Multiple, Comparison, Equation, Area model  [Interactive Math Dictionary](http://www.amathsdictionaryforkids.com/) - Demonstrate with students | | | | **Teacher Resources:**  *Utilize Everyday Math Kits for some manipulatives – ie. Number decks, dice, base-10 blocks etc.*  [Math Unpacking Document](http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/unpacking/math/4th.pdf)  [Standards for Mathematical Practice](http://www.corestandards.org/Math/Practice/)  [Blackline Masters](http://wps.ablongman.com/ab_vandewalle_math_6/0,12312,3547876-,00.html)  [Everyday Math Common Core Crosswalk](https://emccss.everydaymathonline.com/em-crosswalk/grades.php?grade=4) | | |
| **Monday**  **Subject Integration:** | **Whole Group**  Carl the Complainer Cover - **Stacks of Trouble** – teaching the mathematical concept in a skillfully integrated and engaging story - *Or utilize a book you have*. | | | **Small Group**  *Good practice for precision when*  *solving multi-digit multiplication problems.*  Students form teams, name them, and compete with Jeopardy-like questions that include multi-digit multiplication. Timed to answer. If incorrect, the other teams can steal for the points. | | **Independent Work**  Have students practice the concept of inverse operations by using counters to model multiplication problems. Create three or more different models for problems. |
| **Tuesday**  **Subject Integration:** | **Whole Group**  [Representing Multiplication Comparison Problems](https://docs.google.com/a/bryantschools.org/file/d/0B9vx0dToowQXNjcwNmE1NzItYzYzMS00NzZhLTg0ZjQtODgwM2FkZjgwNjQ1/edit?hl=en_US&pli=1)  Brainstorm. Change numbers and circumstances. | | | **Small Group**  [Fun in the Sun Task Cards](file:///C:\Users\INStudent\Downloads\FunintheSunMathTaskCardsCommonCoreFreebie.pdf)  Students *solve* and *switch*! (Randomly select card numbers to begin) | | **Independent Work**  Write three basic facts that have the same product as the number of quarters in three dollars. Vary amounts. |
| **Wednesday**  **Subject Integration:** | **Whole Group**  Video - [Area Models](http://www.showme.com/sh/?h=P8FipAu) - Model/Practice  Calculate the area of the desktop; classroom. | | | **Small Group**  Challenge students to illustrate and explain different multiplication calculations using equations, rectangular arrays, and/or area models. | | **Independent Work**  Multiply the year (or 2 digits of the year) by a 1-digit number. (Use several) Depict in arrays. |
| **Thursday**  **Subject Integration:** | **Whole Group**  Focus: Room raid review (scavenger hunt) – Find a number of objects in the classroom that is a factor of 24. (Ex: 12 chairs) – Or – some other number.  Introduce partial-products and lattice algorithms to solve multiplication problems.[(Grids)](http://everydaymath.com/downloads/Additional_Parent_Resources/EM3_G4_MM.pdf) | | | **Small Group**  Multiplication riddles. Ex: My product is 272. My first factor is a 2 digit number with the digits 8 and 6, not necessarily in that order. My second factor is 2x2. What multiplication factors am I? Challenge students to come up with original riddles. | | **Independent Work**  [Multiplication practice sheet](http://www.tlsbooks.com/multiplication3.pdf)  Students solve 2x1 problems. Upon completion, write a story problem with 2 or more products. |
| **Friday**  **Subject Integration:** | **Whole Group**  **Zip, Zap, Zop** to help students become fluent with multiplication facts up to 12. Students sit in a circle; start counting at 1 and take turns counting to 144. Instead of saying a number that is a product of 10, students say ***zip***; for all numbers that are a product of 12, say ***zap***; and for any number a product of both, say ***zop***. (Use the game with products of other numbers) | | | **Small Group**  [Array Race](http://mathstory.com/mathlessons/arrayrace.htm) – Improve skills: multiplicative arrays, facts, and the concept of area.  Needed: Grid Paper (at least 20 x 25 boxes) Two 9 (or more) sided dice  Colored Pencils | | **Independent Work**  [Rectangle Multiplication](http://nlvm.usu.edu/en/nav/frames_asid_192_g_1_t_1.html?from=topic_t_1.html)  This virtual manipulative tool allows students to create arrays displaying different grouping  (Ex: 3 groups of 6 and 6 groups of 3). |
| **Reflection-Checking for Understanding**  Students in need of **remediation:**  **Action/Activities:**  To help students identify the factors and product of a problem, review the terms. Write the equation 5x4=20 and explain that 5 and 4 are the factors. They are multiplied to get the product of 20. Continue with other examples. Use grid paper to model. | | | **Reflection-Checking for Understanding**  Students on **target:**  **Action/Activities:**  Practice multiplying by multiples of ten. Have students look through a newspaper or catalog to locate an item with a price that is a multiple of ten. Then, write a word problem involving the purchase of the item. Students should explain how to find the cost of purchasing several of the items they selected. | | | **Reflection-Checking for Understanding**  Students who need **enrichment:**  **Action/Activities:**  Have students’ complete extended problems to further develop the concept of multiplication with three factors. Ex: □ x 5 x 6 = 30; 3 x □ x □ = 27  Challenge students write several multiplication problems involving three factors; exchange; explain the steps used to solve the problems. |

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| **Common Standards for Mathematical Practices** - Make sense of problems and persevere in solving them; Reason abstractly and quantitatively; Construct viable arguments and critique the reasoning of others; Model with mathematics; Use appropriate tools strategically; Attend to precision; Look for and make use of structure; Look for and express regularity in repeated reasoning |
| **Note: *Beginning of Year/Semester MAP scheduled for September 22 – 30, 2014*** |